

HYBRID SOLAR INVERTER

ES-HY12KW-48-3PH Serie

Three Phase | WiFi | IP66

All-Scenario Hybrid Power

- Max. 16pcs parallel for on-grid and off-grid operation
- AC coupling upgrade for existing solar systems

Flexible Multi-Energy Input

- Supports diesel generator storage for uninterrupted power
- CT connection enables anti-backflow protection

Powerful Three-Phase Output

- 100% unbalanced three-phase output for stable loads
- 320A high-current charge/discharge for instant power demand

Smart Energy Management

- 6 configurable charge/discharge time segments for peak shaving
- Built-in WiFi monitoring for real-time system control

High-Level Safety Design

- 48V low-voltage battery with transformer isolation
- IP66 waterproof and dustproof for outdoor use

ECOSHIELD
TO A BETTER FUTURE

ES-HY12KW-48-3PH

TECHNICAL DATA	
Rated power	12000W
BATTERY INPUT DATA	
Battery type	Lead-acid battery / Lithium battery
Battery voltage	48V
Charging curve	4-stage adaptive with maintenance/Equalization
Max. Charging/Discharging Power	12000W
Max. Charge/Discharge Current	240A
PV STRING INPUT DATA	
Max. DC Input Power	24000W
Maximum DC voltage	800V
Minimum voltage for grid connection	160V
Full Load DC Voltage Range	429-650V
MPPT voltage range	200~650V
Maximum input current	36A+20A
No.of MPPT tracker	2
Strings per MPPT tracker	2/1
AC INPUT/OUTPUT DATA	
Rated AC Input/ Output Power	12000W
Max AC Input/ Output Power	13200VA
Max. AC Input Power (grid to load)	24000W
Power Factor Adjustment Range	0.8 leading to 0.8 lagging
Rated Input/Output Voltage	220/380,230/400Vac
Rated Input/Output Grid Frequency	60Hz±5Hz/50Hz±5Hz
Grid Type	Three Phase
DC Current Injection	0.5%
EFFICIENCY	
Max. Efficiency	97.6%
Euro Efficiency	97.0%
MPPT Efficiency	99.5%
PROTECTION	
Integrated	Islanding protection, Output overcurrent protection, Output overvoltage protection, DC switch rating for each MPPT, Grid monitoring, Output over current protection, Gird overvoltage protection-varistor, Integrated all-pole sensitive leakage current, ISO monitoring, over temperature protection.
GENERAL DATA	
Operating Temperature Range	-25°C to +60°C, >45°C Derating
Cooling	Intelligent Fan
Noise	≤55dB
Communication with BMS	RS485/CAN
Machine Dimension (W*H*D)(mm)	472*684*311 (excluding connectors and racks)
Package Dimension (W*H*D)(mm)	567*816*424
N.W(kg)	38 (Excluding Connectors and Brackets)
G.W(kg)	42
Protection Degree	IP66
Installation Style	Wall-mounted
Warranty	5 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy
CERTIFICATION & STANDARDS	
CE-EMC+LVD (EN6100-6-3, EN6100-6-1+EN IEC 62109-1, EN IEC 62109-2); CE-LVD(EN 62477-1) ; IEC 60529; EN50549-1; Poland Type A, (NC RfG:2016, PSE:2018, PTPiREE:2021)C10/C11; UNE217001-2020; UNE217002-2020, NTS-631 (Type A); G98+G99	

*The technical specifications of this document are subject to change without any notice